

This listing of claims will replace all prior versions, and listings, of claims in the application:

The Status of the Claims

1. (Currently Amended) A method of manufacturing an electronic component comprising at least one of an n-doped portion or a p-doped portion, the method comprising the steps of:

~~co-depositing semi-conducting nanoparticles as a solid in liquid suspension and dopant on a substrate, the nanoparticles consisting of only either silicon element or germanium element;~~

depositing a hydrophobic material on a substrate to define a region;

depositing a liquid on the substrate, wherein a hydrophobic/hydrophilic interaction between the deposited hydrophobic material and the deposited liquid conforms the liquid to the defined region, wherein the liquid comprises a dopant and suspended nanoparticles, the nanoparticles comprising at least one of silicon or germanium;

fusing in situ on the substrate the nanoparticles by heating to form a continuous layer through a physical change of melting; and

recrystallizing the continuous layer to form the at least one of the n-doped portion or the p-doped portion.

2. (Cancelled)

3. (Previously Presented) The method of claim 1, wherein the nanoparticles have an average diameter in the range of 3-120 nanometers.

4. (Currently Amended) The method of claim 1, wherein at least one of the fusing and/or or the recrystallizing is carried out performed in a reducing atmosphere.

5. (Original) The method of claim 4, wherein the reducing atmosphere comprises approximately 2% hydrogen.
6. (Currently Amended)) The method of claim 4, wherein the reducing atmosphere comprises an inert gas, ~~such as argon.~~
7. (Currently Amended) The method of claim 1, wherein the ~~step of~~ fusing is ~~carried out~~ performed using one or more first laser pulses.
8. (Currently Amended) The method of claim ~~[[1]]~~ 7, wherein the ~~step of~~ recrystallizing is ~~carried out~~ performed using one or more second laser pulses~~[[,]]~~ subsequent to the first laser pulses.
9. (Currently Amended) The method of claim 1, wherein at least one of the fusing ~~step and/or the recrystallizing step~~ is ~~carried out~~ performed in an oven ~~or the like.~~
10. (Currently Amended) The method of claim 9, wherein ~~in~~ the recrystallizing ~~step,~~ comprises cooling the fused nanoparticles ~~are cooled~~ under ~~predetermined~~ conditions to cause recrystallization.
11. (Currently Amended) The method of claim ~~[[1]]~~ 13, wherein ~~the nanoparticles are deposited in a suspension of a carrier fluid~~ the non-ionic surfactant comprises polyethylene glycol.
12. (Currently Amended) The method of claim ~~[[11]]~~ 1, wherein the ~~carrier fluid liquid~~ comprises a dispersion agent, which stabilizes the nanoparticles in suspension to stabilize the suspension of the nanoparticles in the liquid.

13. (Currently Amended) The method of claim 12, wherein the dispersion agent is comprises a non-ionic surfactant ~~such as polyethylene glycol (MW 200).~~

14. (Currently Amended) The method of claim ~~[[11]]~~ 1, wherein the ~~nanoparticles are deposited in~~ liquid is deposited using at least one of an inkjet printing process, or a digital offset printing process, or other a digital printing process.

15. (Currently Amended) The method of claim ~~[[11]]~~ 1, ~~wherein at least one dimension of the area on the substrate to be occupied by the nanoparticles is selected using a prior step of printing~~ further comprising depositing the hydrophobic material using a printing process.

16. (Currently Amended) The method of claim 15, wherein the printing ~~step is~~ process comprises a soft contact lithographic printing process.

17. (Cancelled)

18. (Currently Amended) The method of claim ~~[[17]]~~ 1, wherein the hydrophobic material is comprises a paraffin wax dissolved in toluene ~~or a similar hydrophobic material.~~

19. (Currently Amended) The method of claim 1, wherein the recrystallized continuous ~~structure~~ layer forms at least one of the a source, or a drain, or a gate region of a transistor, or a component of a p-n junction, a component of an n-p junction, a component of a p-n-p junction, or a component of an n-p-n junction.

20. (Currently Amended) The method of claim 1, wherein the electronic component is comprises at least one of a transistor, or a capacitor, or a diode.

21. - 73. (Cancelled)

74. (Previously Presented) An electronic component, or a component thereof
manufactured using the method of claim 1.

75. (Previously Presented) A hetrojunction bipolar transistor according to claim 74.

76. – 88. (Cancelled)